

# **WW Administrators Workshop**

## **Septage Receiving**

**Presented by**

**Matt Campbell**

**Septage Program Coordinator**

**DEQ, Water Bureau**

**Wednesday, January 17, 2007**

## **Septage Receiving**

- **House Bills 5771 and 5772**
  - Signed into law by Governor Granholm on October 12, 2004.
  - This statute is known as Part 117, Septage Waste Servicers of the Natural Resources and Environmental Protection Act, 1994 PA 451, as Amended (Act 451).
  - This is a fee based program.

## Septage Receiving

- The amended law is much more restrictive and impacts the septage waste firms that land apply septage.
- Significant annual fee increase to the haulers.

## Septage Receiving

- In addition to fees, those who land apply must submit soil analysis results, AAR calculations, and cropping plans.
- All firms must submit a summary of the volume pumped and where it was disposed.

# Septage Receiving

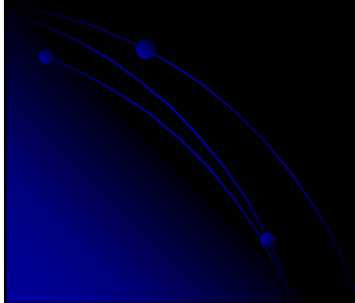
- Continuing septage education requirement.
- A ban on land application to frozen soil effective October 12, 2006.





## Septage Receiving

- Also, all land applied septage must be screened first.







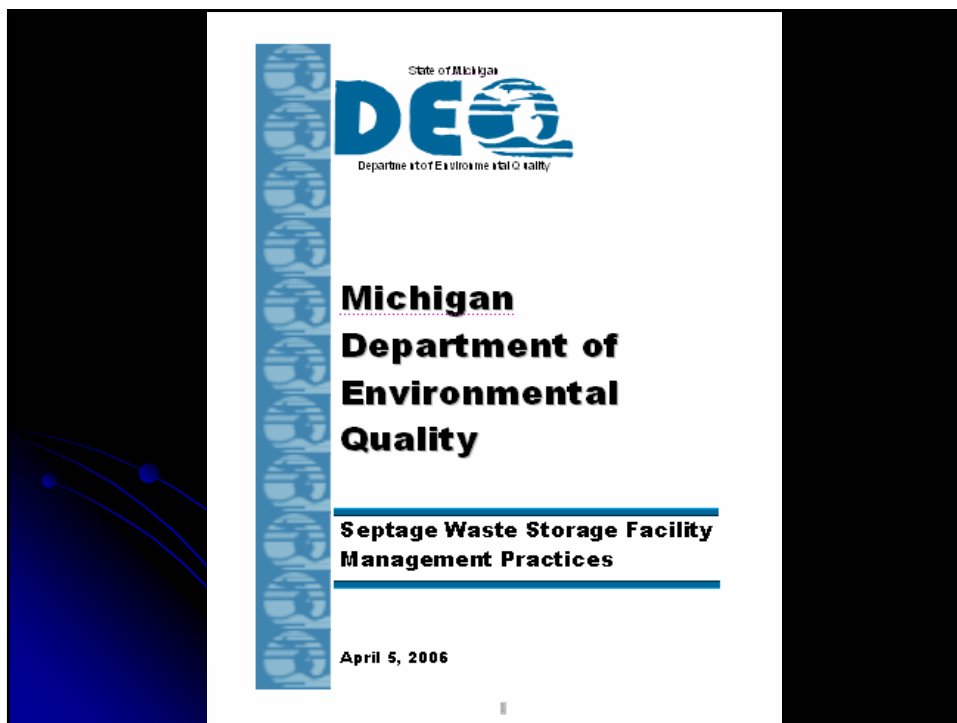


## Septage Receiving

- **Septage generation.**
  - There are approximately 1.4 million onsite wastewater systems in Michigan.
  - The average amount of septage pumped from septic tanks in 2003 and 2004 was 203 million gallons.
  - Half is being land applied.

# Septage Receiving

- **Septage Waste Storage Facilities**
  - The septage firms are required to submit plans for review and approval by the DEQ before construction.
  - SWSF Guidance Document posted on our website; [www.michigan.gov/deqseptage](http://www.michigan.gov/deqseptage)



## Septage Receiving

- **SWSF Fallout Issues**

- The pumping, transport, storage, and especially the land application of human waste is feared and hated by the public.
- Citizen groups are forming to prohibit SWSF construction and land application.
  - Focusing on major and minor issues.
  - Collecting evidence to support case.
- These vocal groups are pressuring the DEQ and local and state officials.

## Septage Receiving

- **SWSF Fallout Issues**

- These citizen groups are filing lawsuits.
- DEQ staff time spent on these cases totals hundreds of hours.
- Townships are taking a serious look at their ordinances and some have re-written them prohibiting SWSF construction and land application.
- Leelanau County Circuit Court recently upheld a township ordinance.

LOCKE TOWNSHIP ORDINANCE  
NUMBER 5 OF 2006  
SEPTAGE WASTE DISPOSAL  
Adopted: Dec. 12, 2006  
Effective: Jan. 23, 2007

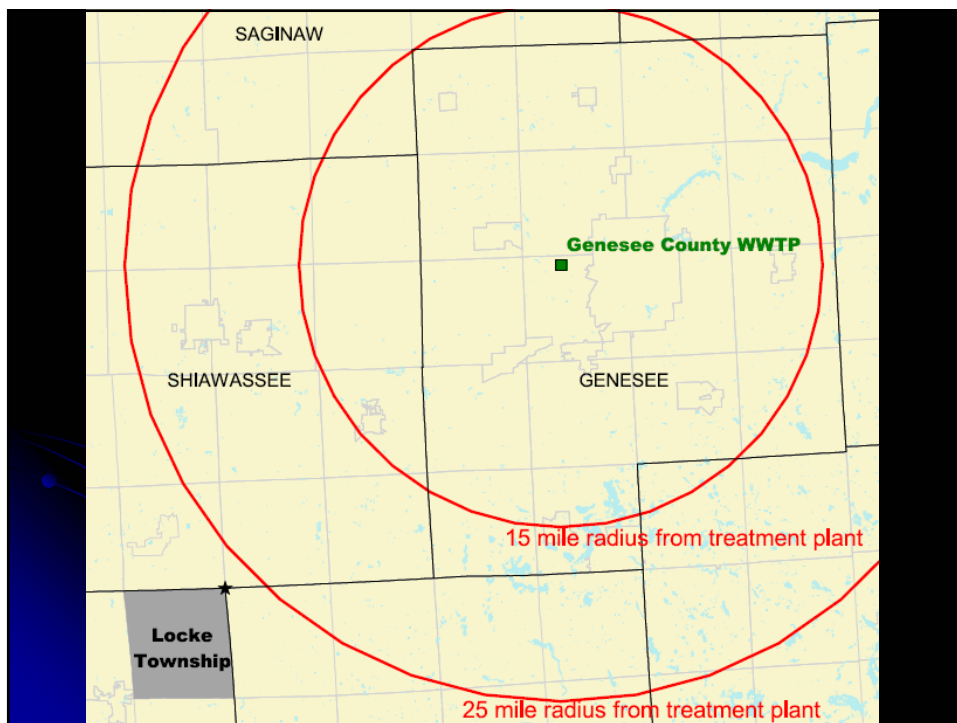
An ordinance to: require septage waste servicers to dispose of septage waste at a licensed facility; prohibit the application of septage waste to land or waters within the township; and to provide penalties for violation.

WHEREAS, Section 11708 of the Michigan Natural Resources and Environmental Protection Act, Public Act 451 of 1994 ("NREPA") requires that a person licensed in the business of septage waste servicing shall deposit all septage waste in a public septage waste treatment facility if such a facility is available to receive that septage waste and is located within 15 radial miles of the location where the septage waste is received; and

WHEREAS, Section 11715 of NREPA authorizes a local governmental unit such as Locke Township to prohibit application of septage waste to land within that governmental unit if a receiving facility is available that can lawfully accept all septage waste generated within that governmental unit that is not lawfully applied to land; and

WHEREAS, there is currently existing and operating a septage waste receiving facility operated by the Genesee County Drain Commissioner's Office, Division of Water & Waste Services which is located at G-4610 Beecher Road, Flint, Michigan, which is licensed to receive septage waste and which is willing to accept septage waste originating in Locke Township; and

WHEREAS, the Genesee County septage waste receiving facility is located a reasonable distance from and is accessible by suitable roads from all locations within Locke Township; and



## Septage Receiving

- So what is a septage hauler to do?
  - Some are building pretreatment devices.
  - Some have built their own WWTPs.
- Most want POTWs to take septage waste.

## Septage Receiving

- Why accept septage waste?
  - Service to the community.
  - Good stewardship.
  - Revenue.

# Septage Receiving

- **The Septage Waste Receiving Facility**
  - **Acseptage**



# Septage Receiving

- **Septage Waste RF Definition**
  - **Structures designed to receive septage waste for treatment and that is available for that purpose as provided for in an ordinance of the local unit of government that operates that WWTP or in an operating plan.**

## Septage Receiving

- **Categories of septage waste.**
  - Domestic septage.
  - Domestic treatment plant septage.
  - Food establishment septage.

## Septage Receiving

- **Part 117 requirements**
  - The service area around an RF can extend outward to 15 radial miles.
  - On October 1, 2010, the service area of a receiving facility increases up to but not more than 25 radial miles.

## Septage Receiving

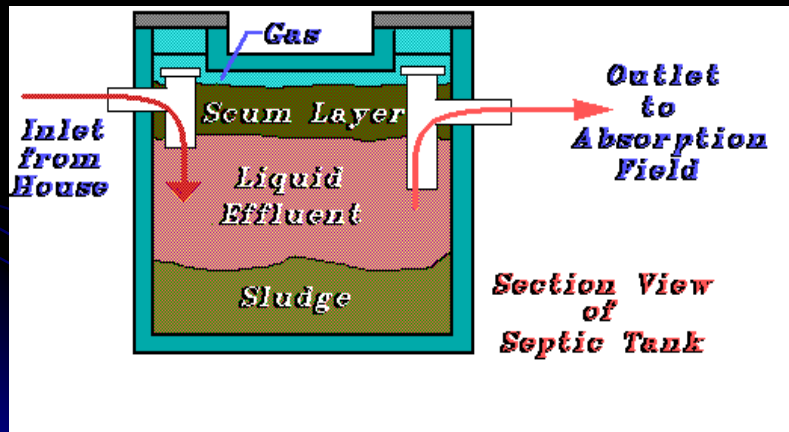
- **Part 117 requirements.**
  - The 15 radial mile service area requirement doesn't apply if the hauler installed a DEQ approved storage facility with a capacity of 50,000 gallons or more.
  - The investment protection noted above ends on October 1, 2025.

## Septage Receiving

- **Have a plan.**
  - Before taking septage waste into your facility ask yourself; can my plant treat this waste?
  - Know, don't guess, how septage waste can impact your plant treatment processes.

# Septage Receiving

- What's in septage?



| Wastewater Parameter    | Septage, mg/L | Sewage, mg/L | Relative Strength Ratio (Septage : Sewage) |
|-------------------------|---------------|--------------|--|
| <b>Compatibles:</b>     |               |              |  |
| 5 – day BOD             | 6,500         | 220          | 30 : 1                                     |
| Chemical Oxygen Demand  | 32,000        | 500          | 65 : 1                                     |
| Total Suspended Solids  | 13,000        | 220          | 60 : 1                                     |
| Total Kjeldahl Nitrogen | 600           | 40           | 15 : 1                                     |
| Ammonia Nitrogen        | 100           | 25           | 4 : 1                                      |
| Total Phosphorus        | 210           | 8            | 25 : 1                                     |
| Oil and Grease          | 5,500         | 100          | 55 : 1                                     |
| <b>Toxics:</b>          |               |              |  |
| Arsenic                 | 0.140         | 0.003        | 50 : 1                                     |
| Cadmium                 | 0.100         | 0.003        | 33 : 1                                     |
| Chromium                | 0.500         | 0.050        | 10 : 1                                     |
| Copper                  | 5.800         | 0.061        | 95 : 1                                     |
| Cyanide                 | 0.470         | 0.041        | 10 : 1                                     |
| Lead                    | 1.200         | 0.049        | 25 : 1                                     |
| Mercury                 | 0.005         | <0.0002      | >25 : 1                                    |
| Nickel                  | 0.500         | 0.021        | 25 : 1                                     |
| Silver                  | 0.100         | 0.005        | 20 : 1                                     |
| Zinc                    | 10.000        | 0.175        | 55 : 1                                     |

## Septage Receiving

- **Plant upset: anaerobic waste into an aerobic process**
- **Planning is the key:**
  - Know your MAHL.
  - Sample.
  - Tracking - who, how much, etc.
  - Set limits for metals and other pollutants
  - Screening out grit & “knick knacks”
  - Calculate your fee

## Septage Receiving

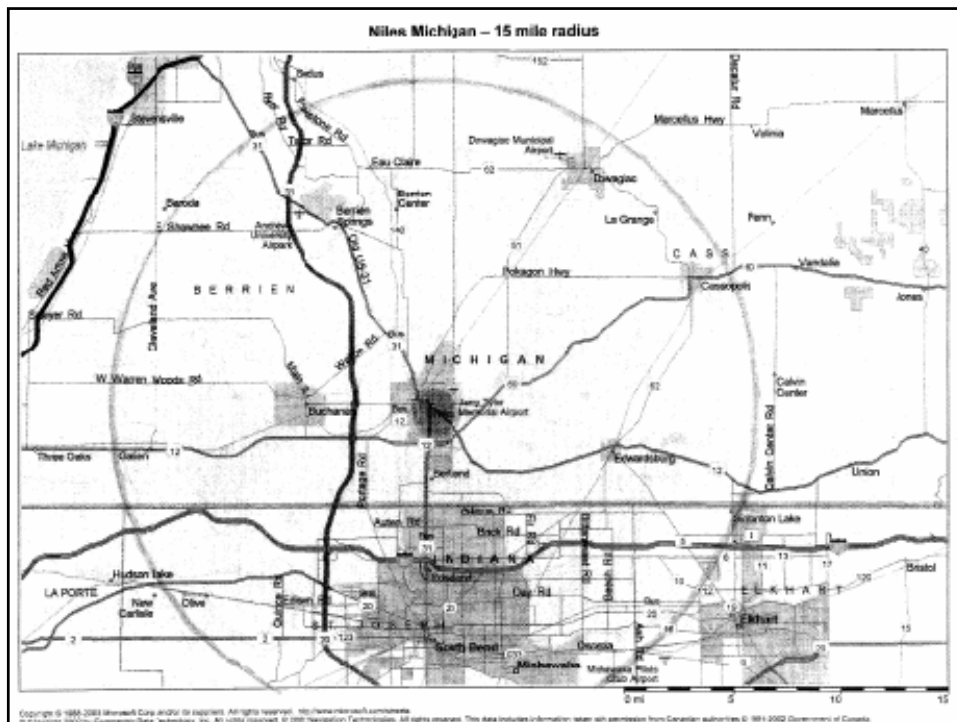
- **Before accepting septage;**
  - All septage receiving facilities (RF) must develop and submit an operating plan for DEQ approval.
  - If the septage waste receiving facility is part of a public sewer system you'll need review and approval under Part 41.

## Septage Receiving

- **The operating plan.**
  - June 9, 2005, memo sent to all known POTWs accepting septage.
  - Law mandated 1 year to develop and get DEQ approval for an RF operating plan.

## Septage Receiving

- **The operating plan – basics.**
  - Location of the RF.
  - Hours of operation.
  - Categories of septage waste the RF will accept.
  - Fee structure outline.
  - Plant capacity (loading and hydraulic).
  - Service area.



## Septage Receiving

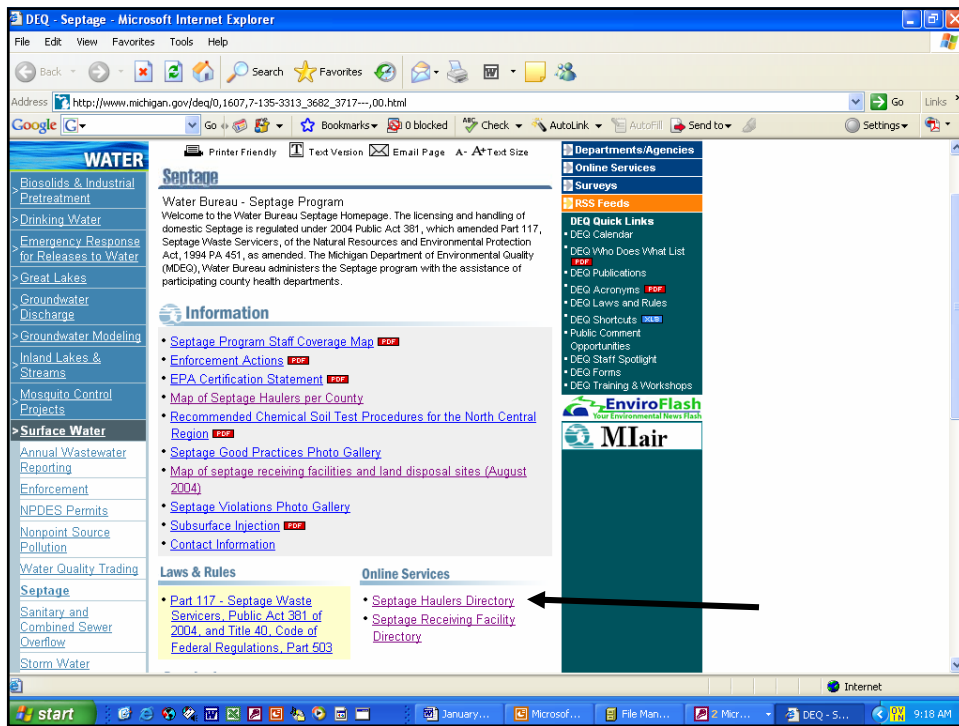
- **Operating plan notice requirements.**
  - **Publish in a local newspaper.**
  - **Post on website.**
  - **Mail notice to county HD and each city, village, and township located within the service area.**
  - **Request for written comments on the plan.**

## Septage Receiving

- **The operating plan.**
  - DEQ approval includes posting on the Septage Program website.
  - Amended plans; changes to the RF specific to septage acceptance.
    - Fee structure changes.
    - Equipment upgrades.
    - Changes to the service area.
    - New contracts with local units of government outside the service area.

## Septage Receiving

- **Septage acceptance.**
  - Only accept septage from a licensed hauler. All licensed haulers are listed in the “Septage Haulers Directory” under “Online Services” on the Septage Program website.



## Septage Receiving

- Prior to the amended law, there were over 40 RFs accepting septage.
- There are only 19 with DEQ approval. All are posted on the program website.
- The following photos show the typical RF being constructed today.









## Septage Receiving

- **Sec. 11715b – Requirement for receiving facilities and control of nuisance conditions; notice of operation; penalties for noncompliance.**
  - The DEQ shall promulgate rules establishing design and operating requirements for receiving facilities and the control of nuisance conditions.

# Septage Receiving

- DEQ will work with any private or public treatment facility that is or wants to accept septage waste.
- DEQ believes this is a better treatment option than land application.
- Questions?
  - Call or write to me at: 517-335-4178 or [Campbelm@michigan.gov](mailto:Campbelm@michigan.gov).
  - [www.michigan.gov/deqseptage](http://www.michigan.gov/deqseptage)

